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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,023	08/01/2006	Nancy Hecker	119010-00369	1237
87133	7590	09/03/2009	EXAMINER	
Dickinson Wright, PLLC 1875 Eye Street, NW Suite 1200 Washington, DC 20006			PHAN, HANH	
			ART UNIT	PAPER NUMBER
			2613	
			NOTIFICATION DATE	DELIVERY MODE
			09/03/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/588,023	Applicant(s) HECKER ET AL.	
	Examiner Hanh Phan	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-19 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-19 is/are allowed.
- 6) ☒ Claim(s) 9 and 10 is/are rejected.
- 7) ☒ Claim(s) 11-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 05/19/2009.
2. In Claim 16, lines 1-3, the phrase “a method for optical transmission of a polarization division multiplexed signal having two orthogonal data signals whose carrier signals have the same wavelengths” should be changed to -- a method for optical transmission of a polarization division multiplexed signal having two orthogonal polarized optical data signals whose first carrier signal and second orthogonal carrier signal respectively have the same wavelengths--.

In Claim 18, lines 1-3, the phrase “a method for optical transmission of a polarization division multiplexed signal having two orthogonal data signals whose carrier signals have the same wavelengths” should be changed to -- a method for optical transmission of a polarization division multiplexed signal having two orthogonal polarized optical data signals whose first carrier signal and second orthogonal carrier signal respectively have the same wavelengths--.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choudhary et al (Pub. No.: US 2004/0208646) in view of Kaplan et al (US Patent No. 7,272,271).

Regarding claim 9, referring to Figures 2A and 2B, Choudhary et al teaches a method for optical transmission of a polarization division multiplexed signal having two orthogonal polarized optical data signals whose first carrier signal and second orthogonal carrier signal respectively have the same wavelengths and are modulated by data signals, comprising:

shifting (i.e., phase shifter 20, Figs. 2A and 2B) the phase of the first carrier signal and the second carrier orthogonal signal so that the first carrier signal of the two orthogonal polarized optical data signals are phase shifted 90° relative to one another (i.e., Figs. 2A and 2B, pages 2 and 3, paragraphs [0025]-[0041]).

Choudhary et al differs from claim 9 in that he fails to specifically teach the phase difference between the carrier signals is controlled. However, Kaplan et al teaches the phase difference between the carrier signals is controlled (i.e., as indicated in Figure 4, the phase shifters 107 and 207 are controlled by a controller 304, col. 5, lines 66-67 and col. 6, lines 1-4). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the phase difference between the carrier signals is controlled as taught by Kaplan et al in the system of Choudhary et al. One of ordinary skill in the art would have been motivated to do this since allowing reducing the crosstalk between the signals.

Regarding claim 10, the combination of Choudhary et al and Kaplan et al teaches wherein that to obtain a phase control criterion the circular polarization component of the polarization division multiplexed signal is measured to provide a control signal (i.e., Fig. 4 of Kaplan et al, col. 5, lines 17-67 and col. 6, lines 1-9).

Allowable Subject Matter

5. Claims 11-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 16-19 are allowed (if overcome the objections above).

Response to Arguments

7. Applicant's arguments with respect to claims 9-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571)272-3078. The fax phone

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number for the organization where this application or proceeding is assigned is
(571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

/Hanh Phan/

Primary Examiner, Art Unit 2613